

A diagram of a dumbbell-shaped cross-section. It features a central horizontal neck and two larger, rounded lobes at the top and bottom. A vertical line with arrows at both ends passes through the center of the shape. A horizontal line with arrows at both ends also passes through the center. The label **A** is placed near the top of the vertical line, and the label **B** is placed near the right end of the horizontal line. The number 20 is written to the right of the top lobe, and the number 30 is written to the right of the central neck. The label **C** is placed near the center of the horizontal line, with a small double-headed arrow pointing left and right.

Figure 1

The circuit diagram shows a differential amplifier with a feedback loop. The input stage consists of a resistor ladder with resistors R_T , R_2 , R_3 , and R_4 . The output of the input stage is connected to the base of a differential pair of transistors Q_1 and Q_2 . The differential pair is biased by a current source I_{EE} connected to ground. The output of the differential pair is connected to the base of a third transistor Q_3 . The output of Q_3 is connected to the output of the differential pair, forming a feedback loop. The output voltage is V_{out} . The circuit is powered by $+V$ and $-V$ supplies. A handwritten label "22" with an arrow points to the output node.

Figure 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

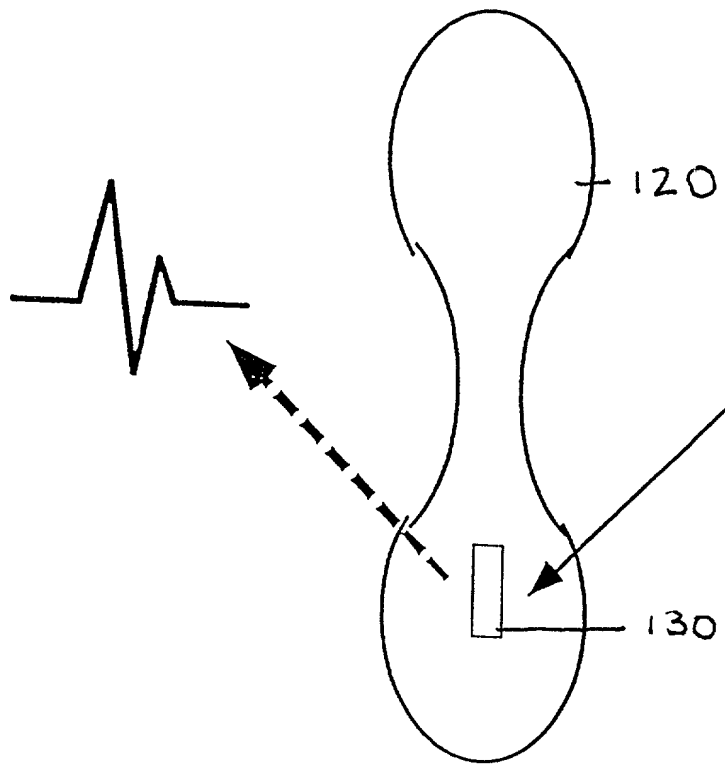


Figure 3

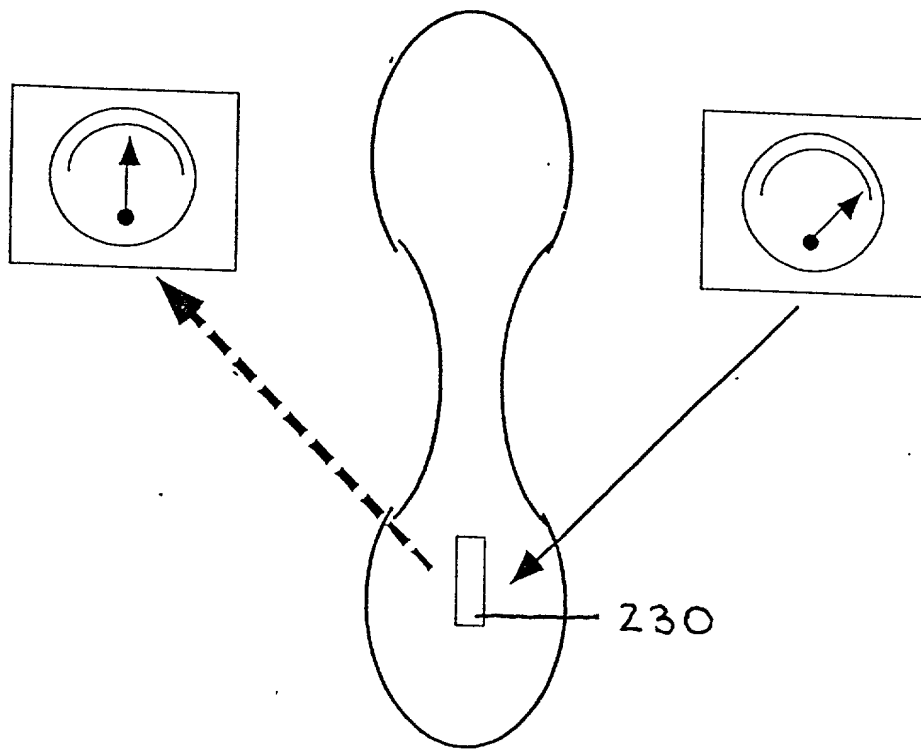
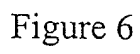


Figure 4



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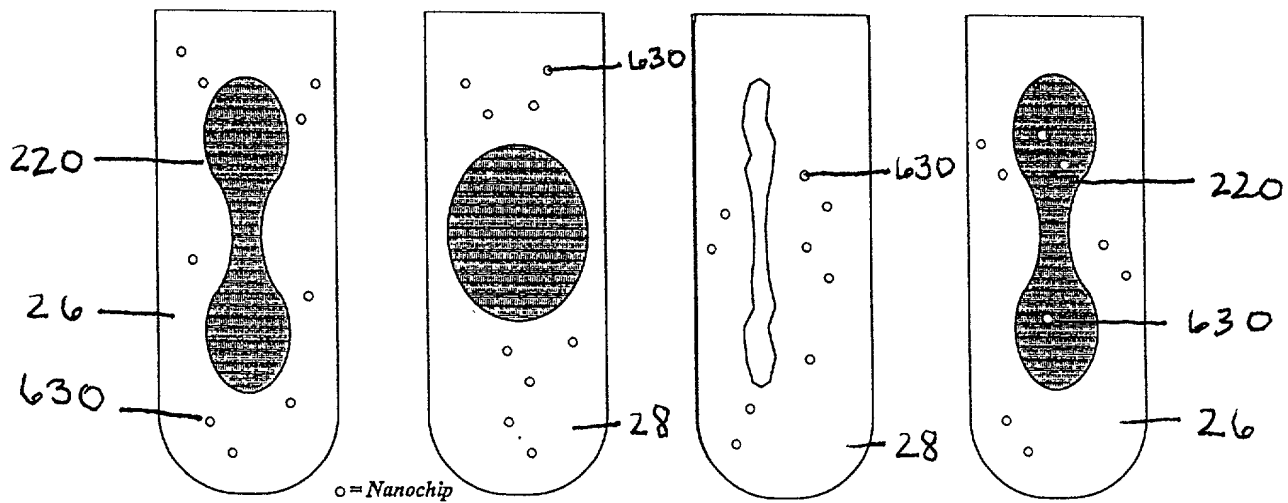


Figure 8

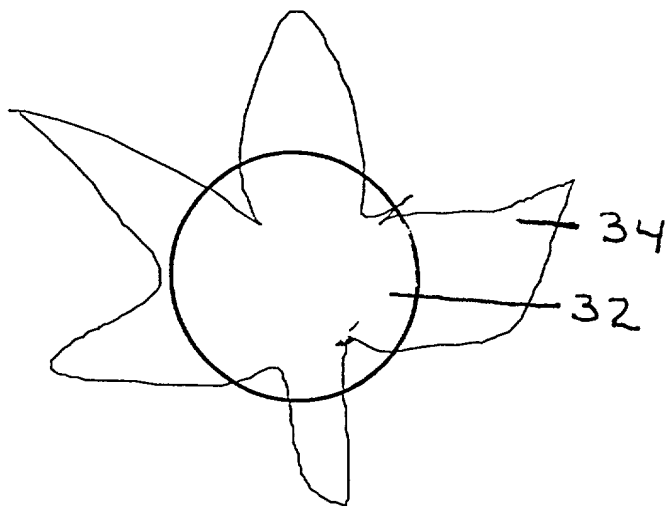


Figure 9

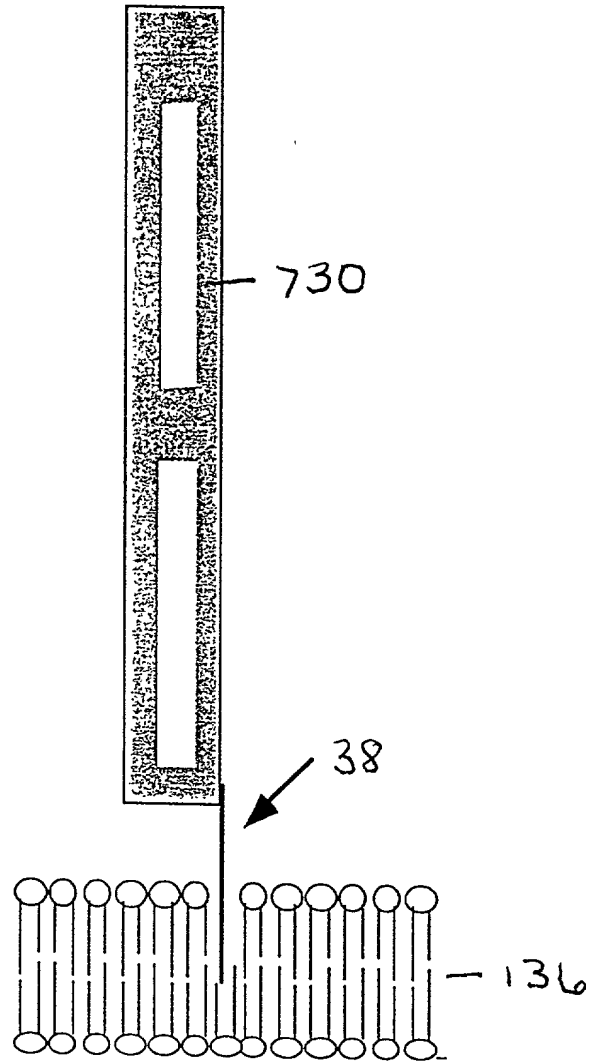


Figure 10

Figure 11

